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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,042	07/17/2003	Bo Su Chen	15436.441.7	2261

22913 7590 08/29/2006

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EXAMINER

ROJAS, OMAR R

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,042	Applicant(s) CHEN ET AL.	
	Examiner Omar Rojas	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16, and 18-45 is/are rejected.
- 7) ☒ Claim(s) 4 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action, EP0234632A1</u> |

DETAILED ACTION

Response to Amendment

1. With regards to the amendment filed on April 28, 2006, all the requested changes to the claims have been entered. Claims 1 to 45 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-3, 5-16, and 18-45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 3, 5, and 8 are objected to because of the following informalities: Each of claims 3, 5, and 8, include the term "may be". The term "may be" is considered imprecise and makes claims 3, 5, and 8 at least somewhat ambiguous. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-3, 5-11, 13-16, 18-22, 27, and 43-45 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US 7,027,478 B2 to Ackley.**

In re claims 1, 13, 27, and 43, Ackley discloses an optical coupling system (e.g., Figs 7A-7B) comprising:

a substrate having a plurality of optoelectronic elements 128 formed on said substrate;

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a plurality of posts 124/126 formed over the plurality of optoelectronic elements 128 on said substrate wherein each post has a height of about 125 microns (col. 1, lines 58-60) ;

a plurality of microlenses formed on said posts (col. 5, lines 4-6);

a window/second substrate having a first side proximate to said plurality of microlenses and having a second side;

and a plurality of optical fibers 120 proximate to said window. The microlenses of Ackley inherently have a thickness of between about 20 microns and 600 microns because they are formed on posts 124 that have a height of about 125 microns.

Figure 7B of Ackley is reproduced below.

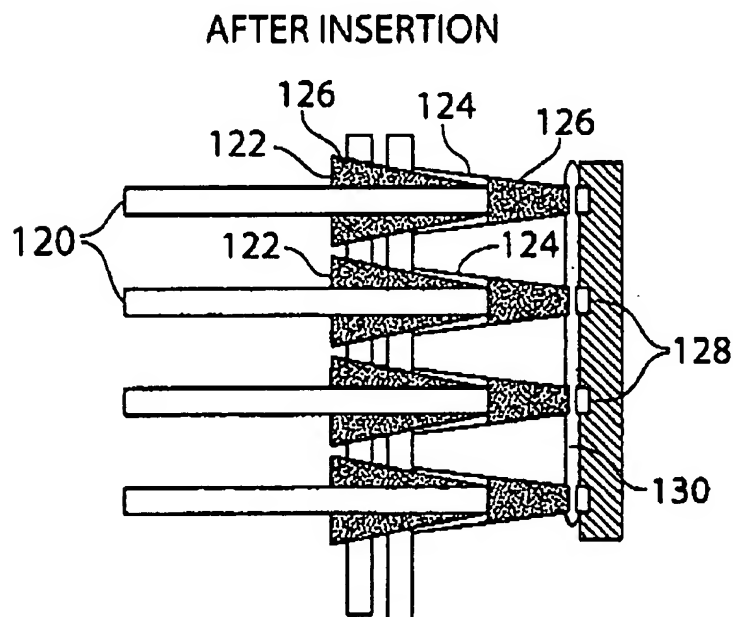


Fig. 7B

In re claims 2-3, 5-10, 14-16, 18-21, and 44-45, the recited limitations are also clearly described or implied by the Ackley patent.

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In re claim 11, the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, the limitations of claim 11 have not been given patentable weight.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ackley.**

In re claims 25 and 26, the previous remarks concerning Ackley are incorporated herein. Ackley only differs from claims 25 and 26 in that Ackley is silent as to the thickness of his window. Applicants have not disclosed a perceived criticality for using a window thickness of 300 microns. It would have been desirable to use a window thickness of 300 microns in Ackley in order to optimize the light transfer efficiency between the optoelectronic elements 128 and the optical fibers 120. Therefore, it would have been obvious to one of ordinary skill at the time of the claimed invention to obtain the invention specified by claims 25 and 26 in view of Ackley.

8. **Claims 12, 23, 24, and 28-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ackley as applied to claims 5, 11, 18, and 27 above, and further in view of EP 0234632 A1 to Amendt et al. ("Amendt").**

In re claims 12, 23, 24, and 28-42, Ackley only differs from these claims in that Ackley does not teach an aspherical lens. Amendt, on the other hand, teaches an aspherical lens 21 that can

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manufactured with high accuracy. The motivation for combining Amendt with Ackley is to achieve high accuracy of the lens surface (Amendt at col. 3, lines 38-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 12, 23, 24, and 28-42 in view of Ackley combined with Amendt.

Allowable Subject Matter

9. Claims 4 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The primary reason for allowance of the claims is the inclusion of a window comprising glass. Ackley does not mention using a window or substrate made of glass. In the examiner's opinion, it would not have been obvious to modify Ackley to use a substrate made of glass absent Applicant's own teachings. This particular feature in combination with the other recited elements of claims 4 and 17 are deemed allowable over the prior art of record.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2004/0184703 A1 to Bakir et al. discloses a microlens 106a formed at the end of a post 104 having a similar height to that claimed by Applicant(s).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (12:00PM-8:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (571) 273-8300. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Omar Rojas
Patent Examiner
Art Unit 2874

or
August 28, 2006

A handwritten signature in black ink, appearing to read 'Rodney Bovernick', with a large, sweeping loop at the end.

Rodney Bovernick
Supervisory Patent Examiner
Technology Center 2800

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